

IN THE CLAIMS

Please amend the claims as follows:

Claim 1 (currently amended): A honeycomb filter for purifying exhaust gases,
comprising: which has a structure in which:

a plurality of ~~[[a]]~~ columnar porous ceramic ~~member are~~ members combined with one another through adhesive layer, each of said columnar porous ceramic member ~~comprising a number~~ having a partition wall and a plurality of through holes, that are placed said through holes extending in parallel with one another in [[the]] a length direction of said columnar porous ceramic members, with partition wall interposed therebetween; and said partition wall which separates separating said through holes functions as a and configured to filter for collecting particulates in an exhaust gas, said through holes of each of said columnar porous ceramic members including ones sealed at an inlet side of said columnar porous ceramic members and ones sealed at an outlet side of said columnar porous ceramic members such that the exhaust gas enters from the inlet side, passes through the partition wall and flows out from the outlet side; and

an adhesive layer combing said columnar porous ceramic members with one another,

wherein said adhesive layer has the relationship between a thermal expansion coefficient α_L , said columnar porous ceramic members have of said adhesive layer and a thermal expansion coefficient α_F , and of said porous ceramic member is as follows: said thermal expansion coefficient α_L of said adhesive layer and said thermal expansion coefficient α_F of said columnar porous ceramic members satisfy a relationship, $0.01 < |\alpha_L - \alpha_F|/\alpha_F < 1.0$.

Claim 2 (currently amended): A honeycomb filter for purifying exhaust gases,
comprising: which has a structure in which:

a ceramic block comprising at least one columnar porous ceramic member, said columnar porous ceramic member having a partition wall and a plurality of through holes, said through holes extending in parallel with one another in a length direction of said columnar porous ceramic member, said partition wall separating said through holes and configured to filter particulates in an exhaust gas, said through holes of each of said columnar porous ceramic members including ones sealed at an inlet side of said columnar porous ceramic members and ones sealed at an outlet side of said columnar porous ceramic members such that the exhaust gas enters from the inlet side, passes through the partition wall and flows out from the outlet side; and

a coating material layer ~~[[is]]~~ formed on ~~[[the]]~~ a circumferential face of ~~[[a]]~~ said ceramic block ~~which comprises at least one of a columnar porous ceramic member,~~

~~each of said columnar porous ceramic member comprising a number of through holes that are placed in parallel with one another in the length direction with partition wall interposed therebetween; and~~

~~said partition wall which separates said through holes functions as a filter for collecting particulates~~

wherein said coating material layer has a ~~the relationship between the~~ thermal expansion coefficient α_M , said columnar porous ceramic member has a ~~of the coating material layer and the thermal expansion coefficient α_F , and of the porous ceramic member~~ are as follows: said thermal expansion coefficient α_M of said coating material layer and said thermal expansion coefficient α_F of said columnar porous ceramic member satisfy a relationship, $0.01 < |\alpha_M - \alpha_F|/\alpha_F < 1.0$.

Claim 3 (currently amended): A honeycomb filter for purifying exhaust gases, comprising: which has a structure in which:

a ceramic block comprising a plurality of [[a]] columnar porous ceramic member are combined with one another through adhesive layer to constitute a ceramic block, members, each of said columnar porous ceramic members having a partition wall and a plurality of through holes, said through holes extending in parallel with one another in a length direction of said columnar porous ceramic members, said partition wall separating said through holes and configured to filter particulates in an exhaust gas, said through holes of each of said columnar porous ceramic members including ones sealed at an inlet side of said columnar porous ceramic members and ones sealed at an outlet side of said columnar porous ceramic members such that the exhaust gas enters from the inlet side, passes through the partition wall and flows out from the outlet side;

an adhesive layer combing said columnar porous ceramic members with one another;
and

a coating material layer [[is]] formed on [[the]] a circumferential face of said ceramic block,

~~each of said columnar porous ceramic member comprising a number of through holes that are placed in parallel with one another in the length direction with partition wall interposed therebetween; and~~

~~said partition wall which separates said through holes functions as a filter for collecting particulates~~

~~wherein the relationship between the thermal expansion coefficient α_L of the adhesive layer and the thermal expansion coefficient α_F of the porous ceramic member are as follows: $0.01 < |\alpha_L - \alpha_F| / \alpha_F < 1.0$, and the relationship between the thermal expansion coefficient α_M of the coating material layer and the thermal expansion coefficient α_F of the porous ceramic member are as follows: $0.01 < |\alpha_M - \alpha_F| / \alpha_F < 1.0$~~ said adhesive layer has a thermal expansion

coefficient α_L , said columnar porous ceramic members have a thermal expansion coefficient α_F , said thermal expansion coefficient α_L of said adhesive layer and said thermal expansion coefficient α_F of said columnar porous ceramic members satisfy a relationship, $0.01 < |\alpha_L - \alpha_F|/\alpha_F < 1.0$, said coating material layer has a thermal expansion coefficient α_M , and said thermal expansion coefficient α_M of said coating material layer and said thermal expansion coefficient α_F of said columnar porous ceramic member satisfy a relationship, $0.01 < |\alpha_M - \alpha_F|/\alpha_F < 1.0$.

Claim 4 (currently amended): A honeycomb filter for purifying exhaust gases,
comprising: which has a structure in which:

a plurality of ~~[[a]]~~ columnar porous ceramic ~~member~~ members ~~combined with one another through adhesive layer~~, each of said columnar porous ceramic member comprising a number having a partition wall and a plurality of through holes, that are placed said through holes extending in parallel with one another in [[the]] a length direction of said columnar porous ceramic members, with partition wall interposed therebetween; and said partition wall ~~which separates~~ separating said through holes ~~functions as a~~ and configured to filter for collecting particulates in an exhaust gas, said through holes of each of said columnar porous ceramic members including ones sealed at an inlet side of said columnar porous ceramic members and ones sealed at an outlet side of said columnar porous ceramic members such that the exhaust gas enters from the inlet side, passes through the partition wall and flows out from the outlet side; and

an adhesive layer combing said columnar porous ceramic members with one another,
wherein the adhesive layer has a thermal capacity per unit volume that is lower than
[[the]] a thermal capacity per unit volume of the porous ceramic member members.

Claim 5 (currently amended): The honeycomb filter for purifying exhaust gases according to claim 4, wherein the thermal capacity per unit volume of the adhesive layer is set to 90% or less of the thermal capacity per unit volume of the porous ceramic ~~member~~ members.

Claim 6 (currently amended): The honeycomb filter for purifying exhaust gases according to claim 4, wherein the thermal capacity per unit volume of the adhesive layer is set to 20% or more of the thermal capacity per unit volume of the porous ceramic ~~member~~ members.

Claims 7-9 (cancelled)

Claim 10 (currently amended): A honeycomb filter for purifying exhaust gases, comprising: which has a structure in which:

a ceramic block comprising at least one columnar porous ceramic member, said columnar porous ceramic member having a partition wall and a plurality of through holes, said through holes extending in parallel with one another in a length direction of said columnar porous ceramic member, said partition wall separating said through holes and configured to filter particulates in an exhaust gas, said through holes of each of said columnar porous ceramic members including ones sealed at an inlet side of said columnar porous ceramic members and ones sealed at an outlet side of said columnar porous ceramic members such that the exhaust gas enters from the inlet side, passes through the partition wall and flows out from the outlet side; and

a coating material layer [[is]] formed on [[the]] a circumferential face of [[a]] said ceramic block ~~which comprises at least one of a columnar porous ceramic member,~~

~~each of said columnar porous ceramic member comprising a number of through holes that are placed in parallel with one another in the length direction with partition wall interposed therebetween; and~~

~~said partition wall which separates said through holes functions as a filter for collecting particulates~~

wherein the coating material layer has a thermal capacity per unit volume that is lower than ~~[[the]]~~ a thermal capacity per unit volume of the porous ceramic member.

Claim 11 (original): The honeycomb filter for purifying exhaust gases according to claim 10, wherein the thermal capacity per unit volume of the coating material layer is set to 90% or less of the thermal capacity per unit volume of the porous ceramic member.

Claim 12 (previously presented): The honeycomb filter for purifying exhaust gases according to claim 10, wherein the thermal capacity per unit volume of the coating material layer is set to 20% or more of the thermal capacity per unit volume of the porous ceramic member.

Claims 13-15 (canceled)

Claim 16 (currently amended): A honeycomb filter for purifying exhaust gases, comprising: which has a structure in which:

a ceramic block comprising a plurality of [[a]] columnar porous ceramic member are combined with one another through adhesive layer to constitute a ceramic block, members, each of said columnar porous ceramic members having a partition wall and a plurality of through holes, said through holes extending in parallel with one another in a length direction of said columnar porous ceramic members, said partition wall separating said through holes and configured to filter particulates in an exhaust gas, said through holes of each of said columnar porous ceramic members including ones sealed at an inlet side of said columnar porous ceramic members and ones sealed at an outlet side of said columnar porous ceramic members such that the exhaust gas enters from the inlet side, passes through the partition wall and flows out from the outlet side;

an adhesive layer combining said columnar porous ceramic members with one another;
and

a coating material layer ~~[[is]]~~ formed on ~~[[the]]~~ a circumferential face of said ceramic block,

~~each of said columnar porous ceramic member comprising a number of through holes that are placed in parallel with one another in the length direction with partition wall interposed therebetween; and~~

~~said partition wall which separates said through holes functions as a filter for collecting particulates~~

wherein the adhesive layer has a ~~[[the]]~~ thermal capacity per unit volume ~~of the adhesive layer and the~~ that is lower than a thermal capacity per unit volume of the columnar porous ceramic members, and the coating material layer has a thermal capacity per unit volume of the coating material layer are that is lower than the thermal capacity per unit volume of the columnar porous ceramic member members.

Claims 17-19 (cancelled)

Claim 20 (currently amended): The honeycomb filter for purifying exhaust gases according to claim 1, further comprising wherein a catalyst ~~[[is]]~~ supported in at least one of said columnar porous ceramic members.

Claim 21 (cancelled)

Claim 22 (new): The honeycomb filter for purifying exhaust gases according to claim 1, wherein said adhesive layer comprises an adhesive comprising a material that is capable of forming independent pores.

Claim 23 (new): The honeycomb filter for purifying exhaust gases according to claim 22, wherein said material that is capable of forming independent pores comprises at least one

material selected from the group consisting of a foaming agent, inorganic balloons and organic balloons.

Claim 24 (new): The honeycomb filter for purifying exhaust gases according to claim 2, wherein said coating material layer comprises a coating material comprising a material that is capable of forming independent pores.

Claim 25 (new): The honeycomb filter for purifying exhaust gases according to claim 24, wherein said material that is capable of forming independent pores comprises at least one material selected from the group consisting of a foaming agent, inorganic balloons and organic balloons.

Claim 26 (new): The honeycomb filter for purifying exhaust gases according to claim 2, further comprising a catalyst supported in said ceramic block.

Claim 27 (new): The honeycomb filter for purifying exhaust gases according to claim 3, wherein said adhesive layer comprises an adhesive comprising a material that is capable of forming independent pores.

Claim 28 (new): The honeycomb filter for purifying exhaust gases according to claim 27, wherein said material that is capable of forming independent pores comprises at least one material selected from the group consisting of a foaming agent, inorganic balloons and organic balloons.

Claim 29 (new): The honeycomb filter for purifying exhaust gases according to claim 3, wherein said coating material layer comprises a coating material comprising a material that is capable of forming independent pores.

Claim 30 (new): The honeycomb filter for purifying exhaust gases according to claim 29, wherein said material that is capable of forming independent pores comprises at least one material selected from the group consisting of a foaming agent, inorganic balloons and organic balloons.

Claim 31 (new): The honeycomb filter for purifying exhaust gases according to claim 3, further comprising a catalyst supported in said ceramic block.

Claim 32 (new): The honeycomb filter for purifying exhaust gases according to claim 4, wherein said adhesive layer comprises an adhesive comprising a material that is capable of forming independent pores.

Claim 33 (new): The honeycomb filter for purifying exhaust gases according to claim 32, wherein said material that is capable of forming independent pores comprises at least one material selected from the group consisting of a foaming agent, inorganic balloons and organic balloons.

Claim 34 (new): The honeycomb filter for purifying exhaust gases according to claim 4, further comprising a catalyst supported in at least one of said columnar porous ceramic members.

Claim 35 (new): The honeycomb filter for purifying exhaust gases according to claim 10, wherein said coating material layer comprises a coating material comprising a material that is capable of forming independent pores.

Claim 36 (new): The honeycomb filter for purifying exhaust gases according to claim 35, wherein said material that is capable of forming independent pores comprises at least one material selected from the group consisting of a foaming agent, inorganic balloons and organic balloons.

Claim 37 (new): The honeycomb filter for purifying exhaust gases according to claim 10, further comprising a catalyst supported in said ceramic block.

Claim 38 (new): The honeycomb filter for purifying exhaust gases according to claim 16, wherein the thermal capacity per unit volume of the adhesive layer is set to 90% or less of the thermal capacity per unit volume of the columnar porous ceramic members.

Claim 39 (new): The honeycomb filter for purifying exhaust gases according to claim 16, wherein the thermal capacity per unit volume of the adhesive layer is set to 20% or more of the thermal capacity per unit volume of the columnar porous ceramic members.

Claim 40 (new): The honeycomb filter for purifying exhaust gases according to claim 16, wherein said adhesive layer comprises an adhesive comprising a material that is capable of forming independent pores.

Claim 41 (new): The honeycomb filter for purifying exhaust gases according to claim 40, wherein said material that is capable of forming independent pores comprises at least one material selected from the group consisting of a foaming agent, inorganic balloons and organic balloons.

Claim 42 (new): The honeycomb filter for purifying exhaust gases according to claim 16, wherein the thermal capacity per unit volume of the coating material layer is set to 90% or less of the thermal capacity per unit volume of the columnar porous ceramic members.

Claim 43 (new): The honeycomb filter for purifying exhaust gases according to claim 16, wherein the thermal capacity per unit volume of the coating material layer is set to 20% or more of the thermal capacity per unit volume of the columnar porous ceramic members.

Claim 44 (new): The honeycomb filter for purifying exhaust gases according to claim 16, wherein said coating material layer comprises a coating material comprising a material that is capable of forming independent pores.

Claim 45 (new): The honeycomb filter for purifying exhaust gases according to claim 44, wherein said material that is capable of forming independent pores comprises at least one material selected from the group consisting of a foaming agent, inorganic balloons and organic balloons.

Claim 46 (new): The honeycomb filter for purifying exhaust gases according to claim 16, further comprises a catalyst supported in said ceramic block.